CLAIMS

1. (original) A method for making molded optical elements on selected areas on a surface of a substrate comprising:

providing a first and second stamper each comprising a mold, said first and said second stamper being separated by a gap;

coating said molds with a locally dispensed optically curable polymer;

bringing said selected area on said surface of said substrate into contact with said coated molds;

exposing said surface of said substrate in contact with said coated molds to light; and

separating said substrate from said molds to leave said molded optical elements on said selected areas on said surface of said substrate.

2. (currently amended) The method of Claim 1 wherein said ~~selected areas on said surface of said substrate~~ first and said second stampers are coated with a release layer.

3. (original) The method of Claim 1 wherein said locally dispensed optically curable polymer is mechanically dispensed onto said molds.

4. (original) The method of Claim 1 wherein said locally dispensed optically curable polymer is dispensed by bringing said molds into contact with a reservoir of optically curable polymer.

5. (original) The method of Claim 1 further comprising placing said coated molds into a vacuum chamber for degassing.

6. (original) The method of Claim 1 wherein said substrate is substantially transparent to light.

7. (original) The method of Claim 1 wherein said substrate is substantially reflective to light.

8. (currently amended) The method of Claim 1 wherein said surface of said substrate is [prepare] prepared to enhance adhesion of said optically curable polymer when said optically curable polymer is cured.

9. (original) The method of Claim 1 wherein an alignment mark is patterned on said surface of said substrate.

10. (original) The method of Claim 1 wherein thin metal elements are patterned on said surface of said substrate for optical functions.

11. (original) The method of Claim 1 wherein the dimensions of said gap are determined by the separation distance between said substrate and said molds when said optically curable polymer begins to flow.

12. (original) The method of Claim 1 wherein providing said first stamper comprises:

coating a stamper blank with said locally dispensed optically curable polymer;

providing a master;

bringing said master into contact with said locally coated stamper blank;

exposing said locally coated stamper blank in contact with said master to light; and

separating said master from said locally coated stamper blank to create said first stamper.

13. (original) The method of Claim 12 wherein said master is coated with a release layer.

14. (currently amended) The method of Claim 12 wherein said master is made from a material chosen from the group consisting of silicon, metal, glass, and plastic.

15. (original) The method of Claim 12 wherein said master has an alignment feature which is transferred to said first stamper.

16. (currently amended) The method of Claim 1 wherein providing said first stamper comprises:

coating a stamper blank with a blanket layer of optically curable polymer ;

providing a master;

bringing said coated stamper blank into contact with said master;

exposing said coated stamper blank in contact with said master to light;

separating said coated stamper blank from said master; and

removing excess material from said coated stamper blank to create said first stamper.

17. (original) The method of Claim 16 wherein said master is coated with a release layer.

18. (original) The method of Claim 16 wherein said excess material is removed by chemical etch.

19. (original) The method of Claim 1 wherein providing said first stamper comprises:

providing a master comprising a cavity wherein optical element shapes are disposed;

overfilling said cavity with said locally dispensed optically curable polymer;

bringing a stamper blank into contact with said optically curable polymer;

exposing said stamper blank and said optically curable polymer [tolight] to light; and

separating said master from said stamper blank leaving said optically curable polymer attached to said stamper blank to create said first stamper.

20. (original) The method of Claim 19 wherein said cavity of said master is coated with a release layer.

21. (currently amended) A method for making a stamper comprising:

coating a stamper blank with a blanket layer of optically curable polymer;

providing a master having a structure to produce gaps on said stamper;

bringing said coated stamper blank into contact with said master;

exposing said coated stamper blank in contact with said master to light;

separating said coated stamper blank from said master; and

removing excess material from said coated stamper blank to create said stamper.

22. (currently amended) A method for making a stamper comprising:

coating a stamper blank with a locally dispensed optically curable polymer;

providing a master having a structure to produce gaps on said stamper;

bringing said master into contact with said locally coated stamper blank;

exposing said locally coated stamper blank in contact with said master to light; and

separating said master from said locally coated stamper blank to create said stamper.